



**US Army Corps  
of Engineers®**  
Albuquerque District

**DRAFT ENVIRONMENTAL ASSESSMENT  
FOR THE  
CITY OF SANTA FE  
WATER TREATMENT PLANT UPGRADE  
SANTA FE COUNTY, NEW MEXICO**

**Prepared By**  
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November 2008

**Finding of No Significant Impact**  
**Section 595 Water Resources Development Act**  
**Water Treatment Plant Upgrade**  
**Santa Fe, New Mexico**

The U.S. Army Corps of Engineers (Corps), Albuquerque District, in cooperation with and at the request of the City of Santa Fe, New Mexico, is planning a project to install new equipment at the existing water treatment plant to improve the residuals processing, handling and disposal. The construction work would be conducted under Section 595 of the Water Resources Development Act of 1996 (Public Law 99-662; 33 U.S.C. 2201 *et. seq*), as amended. The Act authorizes the Corps to provide assistance for design and construction for water-related environmental infrastructure and resource protection and development projects in central New Mexico. The City of Santa Fe is the local sponsor.

The proposed installation of new equipment is required in recognition of upcoming regulations to the handling, processing and disposal of water treatment plant residuals as well as to meet the current needs of a reliable surface water facility. The proposed project area is located on Upper Canyon Road, just east of the Santa Fe City limits and approximately 63 miles north of Albuquerque. The proposed upgrade would accomplish the following goals:

- Modernize and enclose the handling and processing of treatment plant residuals
- Mitigate upsets to plant production resulting from residuals processing impacts
- Improve reliability and increase redundancy of components utilized in residuals processing , handling and disposal

The proposed upgrades would be installed within the fenced area of the existing water treatment plant. These upgrades include the installation of two new gravity thickeners, an equalizer tank, pumping station, plate settlers, batch tanks and centrifuges.

The potential effects of the proposed action are similar to the no-action alternative, with the caveat that the no-action alternative could not assure proper processing, handling or disposal of water treatment plant residuals. In addition, the no-action alternative would not meet the goals of the Safe Drinking Water Act amendments.

The proposed work would not affect waters of the United States regulated by Section 404 of the Clean Water Act (CWA); therefore a Section 404 Department of the Army (DA) permit would not be needed for the project. The proposed upgrades would occur outside the floodplain and would not significantly alter any natural feature or use of the area. Therefore, the planned action is consistent with Executive Order 11988 (Floodplain Management). The proposed work complies with Executive Order 11990 (Protection of Wetlands) as no wetlands are within the project area.

The Corps conducted a literature and data search and a cultural resources inventory survey for the project area. No artifacts or cultural resource manifestations were observed during the survey. The data search found that several archaeological sites and historic structures are known to occur within or near the City of Santa Fe. None of these sites or structures will be

affected by the construction project. Based on existing documentation and the results of the cultural resources survey, as presented in the project's cultural resources survey report, the Corps is of the opinion that there would be "No Historic Properties Effectuated" by the construction project.

Only short-term negligible adverse impacts to aesthetics, soils, air, noise, and vegetation would occur during construction. No impacts would occur to land use, climate, soils (long-term), air (long-term), wetlands or other waters of the U.S., wildlife, floodplains, socioeconomics, special status species, or cultural resources. Human health and safety would be impacted beneficially, although not to a level of significance, and would be long-lasting. The proposed project would not result in any moderate or significant, short-term, long-term, or cumulative adverse effects, and, therefore, is recommended.

Best Management Practices incorporated into this proposed project include the following:

- Exposed and disturbed soil surfaces are watered at a frequency sufficient to avoid dust.
- Earthmoving and other dust-producing activities are suspended during periods of high winds when dust control efforts are unable to prevent fugitive dust.
- Stockpiles of debris, soil, sand, or other materials are watered or covered.
- Materials transported on- or off-site by truck are covered.
- Construction equipment shall be cleaned prior to entering and departing the project corridor to minimize the spread and establishment of non-native invasive plant species.

The planned action has been fully coordinated with federal, state, tribal, and local agencies with jurisdiction over the biological, ecological, cultural, and hydrological resources of the project area. Based upon these factors and others discussed in detail in the Preliminary Draft Environmental Assessment, the planned action would not have a significant effect on the human environment. Therefore, an Environment Impact Statement will not be prepared for the proposed upgrades to the existing water treatment plant.

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Date

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Kimberly M. Colloton  
Lieutenant Colonel, U.S. Army  
District Commander

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## **1.0 INTRODUCTION**

### **1.1 Background and Location**

The United States Army Corps of Engineers (USACE), Albuquerque District, in cooperation with, and at the request of, the City of Santa Fe, New Mexico, is planning to make modifications to the Canyon Road water treatment plant (WTP). In particular, improvements are needed for the residuals handling process. Two prior phases have been completed at the WTP, which included filter rehabilitations and clarifier modifications. This project would be Phase III of the WTP improvements.

The rehabilitation work would be conducted under Section 595 of the Water Resources Act of 1999 (Public Law 106-53), as amended. This Act authorizes the USACE to provide assistance in the form of design and construction for water-related environmental infrastructure, resource protection, and development projects in Idaho, Montana, rural Nevada, New Mexico, and rural Utah. Types of projects included under the Act are: wastewater treatment and related facilities, stormwater retention and remediation, environmental restoration, surface water resource protection and development, and sewer and water line replacement.

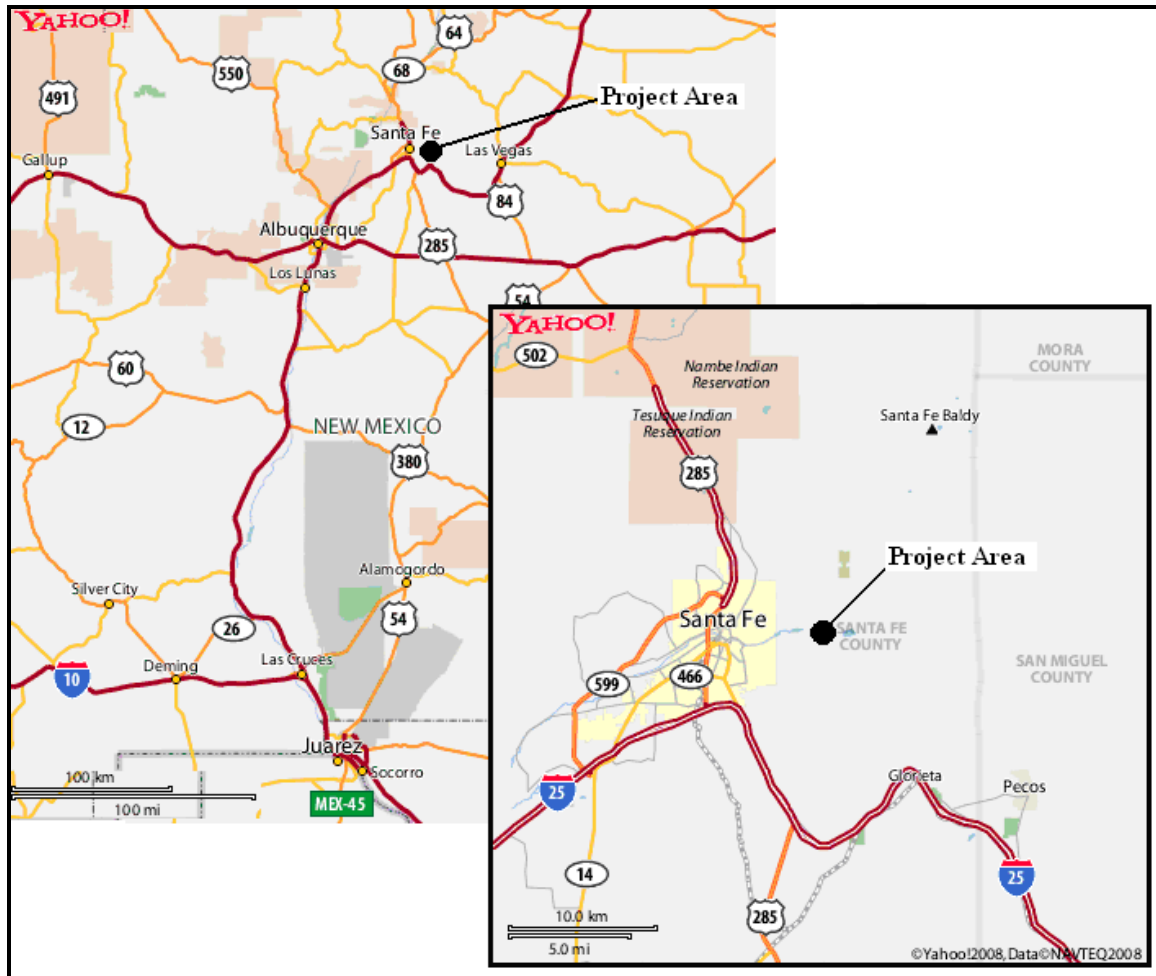
Provisions under the Act require that the project be publicly owned to receive federal assistance. As such, the non-federal sponsor for the proposed project is the City of Santa Fe, New Mexico. The Act further requires that a cooperative agreement be established between the federal and non-federal interests. In general, the federal share of project costs under each cooperative agreement is 75 percent of the total project cost.

The proposed project area is located along Upper Canyon Road, just east of the Santa Fe city limits, within Santa Fe County, New Mexico (see Figure 1). The improvements to the WTP would occur within the existing fenced footprint of the facility, which is 10 acres (see Figure 2). The WTP is a critical component to the water system and serves approximately 60,000 residents in the City of Santa Fe and Santa Fe County. The proposed construction start date would be December 2008 and construction activities would last approximately four months.

### **1.2 Purpose and Need**

The Canyon Road WTP is a 35-year old surface water treatment facility. This facility is a critical component to the water system and supplies approximately 40% of demand (5,040 ac-ft/yr) for the City of Santa Fe and Santa Fe County. The facility is largely fed by seasonal snow melt. In order to optimize the valuable water resource during the seasonal runoff period the facility is required to operate at design capacity while the surface water is available.

Due to its age, the facility has required modifications to its unit processes to maintain effective treatment capabilities that also conform to Safe Drinking Water Act provisions. Phases I and II involved filter rehabilitations and clarifier modifications. Local funding in the amount of approximately \$7,500,000 was used to complete the design and construction for these phases.



**Figure 1.** Vicinity Map of the Proposed Project Area for the Upper Canyon Road Water Treatment Plant Upgrade in the City of Santa Fe, New Mexico.



**Figure 2.** Site Visit Photos of Proposed Project Areas.

Phase III is required in recognition of upcoming regulations to the handling, processing and disposal of water treatment plant residuals as well as to meet the current needs of a reliable surface water facility. Currently there is no redundancy in the residuals process and could easily lead to a complete shutdown of the facility and create the inability to provide peak flow conditions to city and county customers.

### 1.3 Regulatory Compliance

This Draft Environmental Assessment (EA) was prepared for the USACE in compliance with all applicable federal statutes, regulations, and executive orders, including the following:

- Archaeological Resources Protection Act of 1979 (16 U.S.C. 470)
- Clean Water Act of 1972 and Amendments of 1977 (CWA)
- Clean Air Act of 1972, as amended (42 U.S.C. 7401 *et seq.*)
- Endangered Species Act of 1973, (ESA) as amended (16 U.S.C. 1531 *et seq.*)
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations, 1994
- Floodplain Management (Executive Order 11988)
- Invasive Species (Executive Order 13112)
- National Environmental Policy Act of 1969, as amended (NEPA; 42 U.S.C 4321 *et seq.*)
- Regulations for Implementing the Procedural Provisions of NEPA (40 CFR 1500 *et seq.*)
- National Historic Preservation Act of 1966, as amended (16 U.S.C. 470 *et seq.*)
- Native American Graves Protection and Repatriation Act of 1990 (25 U.S.C. 3001 *et seq.*)
- Noxious Weed Act of 1974 (PL93-269; 7 U.S.C. 2801)
- Protection and Enhancement of the Cultural Environment (Executive Order 11593)
- Protection of Wetlands (Executive Order 11990)
- U.S. Army Corps of Engineers' Procedures for Implementing NEPA (33 CFR 230; ER 200-2-2)
- Farmland Protection Policy Act of 1981, as amended (7 U.S.C. 4201 *et seq.*)
- Safe Drinking Water Act of 1974

This Draft EA also reflects compliance with all applicable State of New Mexico and local regulations, statutes, policies, and standards for conserving the environment such as water and air quality, endangered plants and animals, and cultural resources.

## **2.0 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES**

All agencies that assist or take part in projects that utilize federal funding are mandated by the National Environmental Policy Act (NEPA) to evaluate alternative courses of action. Typically, alternatives are a set of different locations that satisfy certain defined project criteria. However, alternatives can also include design considerations and/or attributes that may mitigate or reduce impacts generated by a given action. In general the NEPA process provides decision makers with an evaluation of the present and future conditions with regard to the implementation

and timing of an alternative at a given site. Finally, a particular design chosen from alternatives evaluated can then be implemented in the best interest of the public and environment.

## 2.1 Proposed Action

The WTP has been in the process of implementing phased modifications and improvements to enhance its reliability, and to meet the goals of the Safe Drinking Water Act amendments. An evaluation was conducted with operations and maintenance staff involvement to determine the most effective solutions for implementation. At the end of this evaluation, the following project components were selected for Phase III (also see Figure 3):

- Two 65-foot diameter gravity thickeners
- One additional 80,000 gallon EQ tank for spent filter backwash water
- EQ mix/recycle pumping station
- Spent filter backwash treatment using plate settlers
- Residual processing building with batch tanks and centrifuges

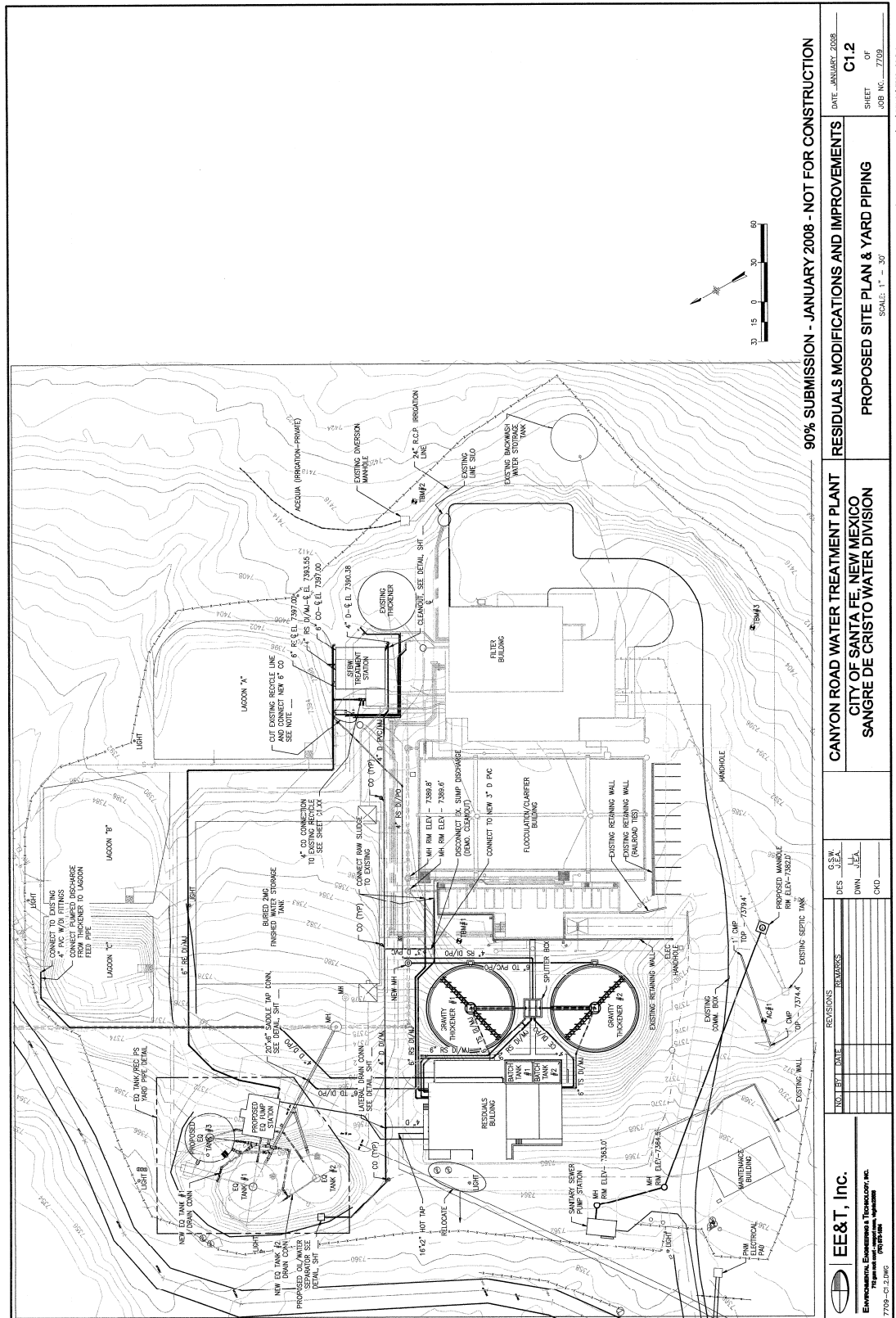
All of the components listed above incorporate redundant equipment to mitigate processing interruptions as a result of equipment downtime. The residuals building would include sludge pumping systems and a conveyor, which is used to load dewatered sludge to a dump truck inside the facility. These improvements would eliminate the outdoor handling and disposal activities prevalent up to now. Plant production reliability would also be enhanced through separation and separate processing of the two major residual streams, the alum sludge from clarifiers, and the spent filter backwash from filter backwashing.

Water recycled to the head of the plant would be of similar quality as the raw water, mitigating process upsets. The proposed project would also eliminate an onsite septic system for plant sanitary waste, and separate sanitary waste discharges from miscellaneous process discharges. Furthermore, more water could be collected and re-used, and the system would be very close to achieving a zero discharge condition.

## 2.2 The No-Action Alternative

Under the no-action alternative, the improvements to the Canyon Road WTP facility would not occur. No federal funding would be expended and there would be no new effects to the project area or surrounding environment. However, some existing components of the WTP are outdated and much of the equipment and processes require modifications. Improvements are needed in recognition of upcoming regulations to the handling, processing and disposal of water treatment plant residuals as well as meet the current needs of a reliable surface water facility.

Due to the need to comply with upcoming regulations, the age of the facility, and the overall deterioration of the plant components, this alternative was considered infeasible.



**Figure 3.** Proposed Site Plan for the Upper Canyon Road Water Treatment Plant Upgrade in the City of Santa Fe, New Mexico.

90% SUBMISSION - JANUARY 2008 - NOT FOR CONSTRUCTION

RESIDUALS MODIFICATIONS AND IMPROVEMENTS	
DATE JANUARY 2008	C1.2
SHEET OF	7709
JOB NO. 7709	

CANYON ROAD WATER TREATMENT PLANT	
CITY OF SANTA FE, NEW MEXICO	
SANGRE DE CRISTO WATER DIVISION	

NO.	BY	DATE	REVISIONS	REMARKS
1	JEA			
2	JEA			
3	JEA			
4	JEA			
5	JEA			
6	JEA			
7	JEA			
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EE&T, Inc.	
Environmental Engineering & Science, Inc.	
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### **3.0 EXISTING ENVIRONMENT AND FORESEEABLE EFFECTS**

#### **3.1 Physical Resources**

##### **3.1.1 Physiography, Geology, and Soils**

The project area lies in the southwestern Sangre de Cristo Mountains in the Santa Fe Range. The north-south trending Sangre de Cristo Mountains are about 225 miles long, extending from near Salida, Colorado, at the north end to just southeast of Santa Fe at the south end. The Sangre de Cristo Mountains are considered to be part of the Southern Rocky Mountain physiographic province. The mountains rise abruptly from the relatively topographically subdued High Plains on the east side. The Rio Grande rift, a northerly-trending zone of continental extension that runs from northern Colorado to west Texas, marks the western boundary of the range. The Santa Fe Range, which is cored by Proterozoic basement rocks, is bound on the north by the Peñasco embayment, on the south by Glorieta Pass, on the west by the Espanola Basin, and on the east by the Picuris-Pecos Fault just west of the Pecos River.

Soils in the vicinity of the project area are a part of the Chimayo-Mirabal-Supervisor association (USDA 2008). These soils are moderately sloping to very steep, shallow to moderately deep, loamy and very gravelly or very stony soils, which are located on mountain foot slopes. This association consists of well-drained soils that formed in material weathered from granite, gneiss, and schist. Slopes are 5 to 100 percent. Elevation ranges from 7,500 to 9,500 feet. This association is used for timber production, for range, as wildlife habitat, and for water supply and recreation. Runoff is rapid on Chimayo, Mirabal, and Supervisor soils. The hazard of water erosion is moderate to severe in areas where range is in poor condition. Maintaining maximum cover on range and using soil and water conservation practices help to minimize the hazard of erosion. However, within the immediate project area, there is 20-30 feet of earth fill. This was done as part of the original WTP construction in the early 1970s. There would be short-term negligible effects to soils by the proposed project during construction.

##### **3.1.2 Climate**

Santa Fe County has a semiarid, continental climate with warm summers, cool, dry winters, and plenty of sunshine. Precipitation generally increases with elevation. The mean annual precipitation is 12 to 15 inches, and the mean annual air temperature is 48° to 52° F. The frost-free season is 150 to 160 days. Santa Fe usually receives 6 to 8 snowfalls a year between November and April. Heaviest rainfall occurs in July and August. Santa Fe has 300+ days of sunshine a year an average relative humidity of 50%. Winds average 12 miles per hour. Monthly averages range from around 10 miles per hour in the summer to around 14 miles per hour in the spring (USDA 2008). Neither the no action alternative nor the proposed action would measurably affect climatic conditions or trends in climate change in the region.

##### **3.1.3 Water Resources**

Section 402 of the Clean Water Act (CWA; 33 U.S.C. 1251 *et seq.*), as amended, regulates point-source discharges of pollutants into waters of the United States and specifies that

storm-water discharges associated with construction activities shall be conducted under the National Pollution Discharge Elimination System (NPDES) guidance. Construction activities associated with storm-water discharges are characterized by such things as clearing, grading, and excavation, subjecting the underlying soils to erosion by storm-water, which results in a disturbance to one or more acres of land. The NPDES general permit guidance would apply to this project because the total project area is approximately one acre. Therefore, a Storm-Water Pollution Prevention Plan (SWPPP) is required and would be prepared for this project. Standard Best Management Practices to prevent on- and off-site erosion would be incorporated in contract specifications and the SWPPP. Impacts from storm-water are expected to be negligible.

Section 404 of the CWA, (CWA; 33 U.S.C. 1251 *et seq.*) as amended, provides for the protection of waters of the United States through regulation of the discharge of dredged or fill material. The Corps' Regulatory Program (33 CFR Parts 320-330) requires that a Section 404 evaluation be conducted for all proposed construction that may affect waters of the United States. Section 404 of the CWA does not apply to this project, as there would be no discharge of dredged or fill material into waters of the United States.

Section 401 of the CWA, (CEA; 33 U.S.C. 1251 *et seq.*) as amended, requires that a Water Quality Certification Permit be obtained for anticipated discharges associated with construction activities or other disturbance within waterways. Section 401 of the CWA does not apply to this project, as there would be no discharge associated with construction activities or other disturbance within waterways.

#### 3.1.4 Floodplains and Wetlands

Executive Orders 11988 (Floodplain Management) provides Federal guidance for activities within the floodplains of inland and coastal waters. The order requires Federal agencies to take action to reduce the risk of flood loss, to minimize the impact of floods on human safety, health, and welfare, and to restore and preserve the natural and beneficial values served by floodplains. The proposed project location is designated as Zone X in the Santa Fe County Flood Insurance Map. This designation is for those areas determined to be outside the 500-year floodplain. Therefore, impacts to the historic or current floodplains are not expected due to the proposed project.

Executive Order 11990 (Protection of Wetlands) requires the avoidance, to the greatest extent possible, of both long and short-term impacts associated with the destruction, modification, or other disturbance of wetland habitats. There are no wetlands within the project area, and therefore, no impacts to wetlands would occur.

#### 3.1.5 Air Quality, Noise, and Aesthetics

The City of Santa Fe is in New Mexico's Air Quality Control Region Number 3 for air quality monitoring, and Santa Fe County is "in attainment" (does not exceed state or federal EPA air quality standards) for all criteria pollutants (NMED/AQB 2007). Class I areas are special areas of natural wonder and scenic beauty, such as national parks, national monuments, and wilderness areas, where air quality should be given special protection. Class I areas are subject

to maximum limits on air quality degradation. The closest Class I area is Pecos Wilderness, which is located approximately five miles to the northeast of the project area. Air quality in the Pecos Wilderness would not be affected long-term by the proposed project or by the no-action alternative.

Increased dust and locally elevated levels of particulate matter may be created during activities associated with project construction. Compliance specifications would be strictly administered for all equipment operations and dust-producing aspects of construction operations. The control of particulate matter emanating from various construction and demolition activities is conducted in accordance with all applicable federal and state regulations. All vehicles involved in transporting rubble and spoil from the project site to the deposition area are required to have passed a current New Mexico emissions test and have required emission control equipment. To minimize exhaust emissions, contractors are required to use emission-control devices and limit idling of construction equipment. According to 20.11.20 New Mexico Administrative Code, Fugitive Dust Control, a permit application is required if three quarters of an acre or more is to be disturbed and for demolition projects over 75,000 cubic feet. This permit would be acquired by the construction contractor if applicable.

To minimize dust impacts during construction, the construction contractor would ensure that the following practices are implemented:

- Exposed and disturbed soil surfaces are watered at a frequency sufficient to avoid dust.
- Earthmoving and other dust-producing activities are suspended during periods of high winds when dust control efforts are unable to prevent fugitive dust.
- Stockpiles of debris, soil, sand, or other materials are watered or covered.
- Materials transported on- or off-site by truck are covered.

If these recommendations are followed, a short-term negligible effect to air quality in the project vicinity would occur from the proposed project. Air quality would not be affected by the no-action alternative.

Background noise levels in the proposed project area are relatively low. According to the Noise Center for the League for the Hard of Hearing (League for the Hard of Hearing, 2004), a typical, quiet residential area, has a noise level of 40 decibels. A residential area near heavy traffic has a noise level of 85 decibels. Heavy machinery has a noise level of 120 decibels. During construction, noise would temporarily increase in the vicinity during vehicle and equipment operation. The Noise Center advises that noise levels above 85 decibels will harm hearing over time and noise levels above 140 decibels can cause damage to hearing after just one exposure. However, the increase in noise during construction would be minor and temporary, ending when construction is complete. Therefore, the proposed project and the no-action alternative would have no significant effect on noise levels in the area.

Aesthetically, the terrain of the project area is characterized by an existing WTP, which includes lagoons, facilities and an administrative building. The project vicinity receives no recreational use with the intent of viewing scenery. The proposed new equipment would be in

keeping with the aesthetic character of the existing WTP. In sum, aesthetic conditions would not be adversely affected by the proposed project or the no-action alternative.

### 3.2 Biological Resources

#### 3.2.1 Vegetation Communities

The project site is part of the Tundra and Forest vegetation community as described by Dick-Peddie (1993). Particularly, the project site exists within the lower mountain coniferous forest. However, soils and vegetation within the immediate project area have been greatly disturbed from the original construction of the WTP. A site visit on 28 May 2008, by Corps personnel, revealed vegetation consisting of grey rabbitbrush (*Chrysothamnus nauseosus*), tumble pigweed (*Amaranthus albus* L.), silver sagebrush (*Artemisia cana*), purple aster (*Machaeranthera canescens*), Russian thistle (*Salsola iberica*), one-seed juniper (*Juniperus monosperma*), London rocket (*Sisymbrium irio*), Ponderosa Pine (*Pinus ponderosa*), fourwing saltbush (*Atriplex canescens*), common ragweed (*Ambrosia artemisiifolia*), and white sweetclover (*Melilotus alba*). Including the species listed above, very little vegetation exists within the fenced boundary of the WTP. The construction of the new equipment would be located within the existing fencing that surrounds the WTP. Impacts to vegetation are not substantial or would not significantly alter the vegetation of the area. There would be no effects from the no-action alternative.

Construction equipment shall be cleaned prior to entering and departing the project corridor to minimize the spread and establishment of non-native invasive plant species.

#### 3.2.2 Wildlife

According to Brown (1982), the project area occurs within the biotic community of the Rocky Mountain and Madrean Montane Conifer Forests. Wildlife species that could frequent this area may include: Goshawk (*Accipiter gentilis*), Red-faced Warbler (*Cardellina rubrifrons*), Steller's Jay (*Cyanocitta stelleri*), Red Warbler (*Ergaticus ruber*), Western Tanager (*Piranga ludoviciana*), Brown Creeper (*Certhia familiaris*), Pygmy Owl (*Glaucidium gnoma*), Gray Wolf (*Canis lupus*), Big Brown Bat (*Eptesicus fuscus*), Colorado Chipmunk (*Eutamias quadrivittatus*), Mexican Woodrat (*Neotoma mexicana*), Mule Deer (*Odocoileus hemionus*), Deer Mouse (*Peromyscus maniculatus*), Tiger Salamander (*Ambystoma tigrinum*), Western Skink (*Eumeces callicephalus*), Gopher Snake (*Pituophis melanoleucus*) and Bunchgrass Lizard (*Sceloporus scalaris*). These are just a few of the species that may frequent the area.

Because the proposed project work would be confined to the fenced WTP, minimal wildlife would be displaced during installation. No significant impacts should occur to wildlife as a result of the proposed project or the no-action alternative.

### 3.2.3 Special Status Species

Three agencies have primary responsibility for protecting and conserving plant and animal species within the proposed project area. The United State Fish and Wildlife Service (USFWS), under authority of the Endangered Species Act of 1973 (16 U.S.C. 1531), as amended, has the responsibility for federally listed species. The New Mexico Department of Game and Fish (NMDGF) has the responsibility for state-listed wildlife species. The New Mexico Department of Minerals, Natural Resources, Forestry Division, has the responsibility for state-listed endangered plant species. The State species list indicates that are no status plant species that occur in Santa Fe County (New Mexico Rare Plants Technical Council 2008 Website [<http://nmrareplants.unm.edu/>]).

Each agency maintains a continually updated list of species that are classified, or are candidates for classification, as protected based on their present status and potential threats to future survival and recruitment into viable breeding populations. These types of status rankings represent an expression of threat level to a given species survival as a whole and/or within local or discrete populations. Special status species that potentially occur in Santa Fe County and may occur near the proposed project area are listed in Table 1 and described in more detail below.

**Table 1. Special Status Species Listed for Santa Fe County, New Mexico.**

Common Name	Scientific Name	Federal Status (USFWS) <sup>a</sup>	State of New Mexico status (NMDGF) <sup>b</sup>
<b>Animals</b>			
Bald Eagle	<i>Haliaeetus leucocephalus</i>	---	T
American Peregrine Falcon	<i>Falco peregrinus anatum</i>	---	T
Baird's Sparrow	<i>Ammodramus bairdii</i>	SC	T
Southwester Willow Flycatcher	<i>Empidonax traillii extimus</i>	E	E
Least Tern	<i>Sterna antillarum athalassos</i>	E	E
Mexican Spotted Owl	<i>Strix occidentalis lucida</i>	T	---
White-tailed Ptaarmigan	<i>Lagopus leucura altipetens</i>	---	E
Artic Peregrine Falcon	<i>Falco peregrinus tundrius</i>	SC	T
Violet-crowned Hummingbird	<i>Amazilia violiceps ellioti</i>	---	T
Boreal Owl	<i>Aegolius funereus</i>	---	T
Gray Vireo	<i>Vireo vicinior</i>	---	T
American Marten	<i>Martes americana origenes</i>	---	T
Lilljeborg's Peaclam	<i>Pisidium lilljeborgi</i>	---	T
Northern Goshawk	<i>Accipiter gentiles atricapillus</i>	SC	---
Burrowing Owl	<i>Atiene cunicularia hypugaea</i>	SC	---
Mountain Plover	<i>Charadrius montanus</i>	SC	---
White Sands Wood Rat	<i>Neotoma micropus leucophaea</i>	SC	---
Pale Townsend's Big-eared Bat	<i>Corynorhinus townsendii</i>	SC	---
	<i>pallescent</i>		
Santa Fe Raspberry	<i>Rubis aliciae</i>	---	R

<sup>a</sup> **Endangered Species Act (ESA)** (as prepared by U.S. Fish and Wildlife Services) **status:** Only Endangered and Threatened species are protected by the ESA.

**E=** Endangered: any species that is in danger of extinction throughout all or a significant portion of its range.

**T=** Threatened: any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

**SC=** Species of Concern: taxa for which information now in the possession of the Service indicates that proposing to list as endangered or threatened is possible appropriate, but for which sufficient data on biological vulnerability and threat are not currently available to support proposed rules.

<sup>b</sup> **State of New Mexico status:**

**E=** Endangered Animal species whose prospects of survival or recruitment within the state are in jeopardy.

**T=** Threatened Animal species whose prospects of survival or recruitment within the state are likely to become jeopardized in the foreseeable future.

**R=** Rare Plant Species.

The Bald Eagle, recently delisted by the federal government but still listed by the State of New Mexico as a Threatened species, is normally found near major waterways and larger lakes where adequate food supplies may be found. The Bald Eagle is known to occur in New Mexico primarily during the late fall and winter months. The Bald Eagle utilizes large trees for perching and forages primarily for fish, ducks, and carrion along rivers and at local reservoirs. No preferred habitat exists within or near the project area. Due to the lack of preferred habitat and the limited disturbance of the proposed project, there would be no effect to the Bald Eagle.

The American Peregrine Falcon is a federally delisted species with an approved recovery plan, and a New Mexico State Threatened species. The peregrine falcon may fly over the construction area during spring and fall migration. The peregrine prefers breeding habitat that is in isolated wooded areas with cliffs that create gulfs of air in which the peregrine may forage. Due to the ease of mobility of the peregrine, the limited disturbance of the proposed project and the lack of preferred habitat in the project area, there would be no effect to the American Peregrine Falcon.

Baird's Sparrow is a New Mexico State Threatened species and a federal species of concern. The sparrow is a migrant to New Mexico, occurring mainly in autumn primarily in the eastern plains and southern lowlands, but is considered rare to uncommon and a vagrant. This species favors shrubby short-grass habitats. The sparrow may fly over the construction area during migration; however, due to the ease of mobility, the limited disturbance of the proposed project and lack of preferred habitat in the project area, there would be no effect to Baird's Sparrow.

The Mexican Spotted Owl, a Federal listed Threatened species, is most commonly found along canyon and steep slopes in old growth mixed conifer or broad-leaved forests, but is also sometimes found in oak or spruce-fir forests. This species occurs in varied habitat, consisting of mature montane forest and woodland, shady wooded canyons, and steep canyons. In forested habitat, uneven-aged stands with a high canopy closure, high tree density, and a sloped terrain appear to be key habitat components. They can also be found in mixed conifer and pine-oak vegetation types. Elevation ranges from 1,249 to 2,743 m (4,100 to 9,000 ft). On January 15, 2001, the U.S. Fish and Wildlife Service (USFWS) designated approximately 4.6 million acres of critical habitat for the Mexican Spotted Owl in Arizona, Colorado, New Mexico, and Utah, on Federal Lands. Although there is no preferred habitat within the construction area, critical habitat has been designated approximately five miles to the northeast. Due to the lack of

preferred forest habitat in the construction area, the existing human presence at the WTP, and the limited disturbance of the proposed project, the proposed construction would have no effect on this species.

In addition, the New Mexico Department of Minerals, Natural Resources, Forestry Division has the responsibility for maintaining the list of state-listed rare plant species. The State species list indicates that there are twelve status plant species that occur in Santa Fe County. They are each listed by the State of New Mexico Division of Forestry as a rare plant on the New Mexico Rare Plants Technical Council Website. Although these plants are known to occur in Santa Fe County, they are not likely to occur within the project area. None of the above rare plants were seen during the Corps' site visit on 28 May 2008. None of the above rare plant's preferred habitat is located within the project area, and therefore there would be no effect to these rare plants.

There would be no effect to the species listed above from the no-action alternative.

### 3.3 Cultural Resources

Santa Fe is a city rich in cultural resources. However, a search of the New Mexico Cultural Resource Information System returned no cultural resources in the project footprint. The proposed project area is located on the eastern outskirts of Santa Fe, up the steep-sloped canyon of the Santa Fe River. There is little archaeological or historic evidence of significant use of the project area until 1800s—most of the history of the project area is centered on controlling water for the growing city of Santa Fe. Significant developments include construction of Two Mile Dam in the early 1890s (with an associated hydroelectric plant and grain mills) followed by McClure Reservoir in 1928 and Nichols Reservoir in 1943. On the southern edge of the property runs the Acequia Del Llano, an irrigation ditch that provides water to 20 users. This acequia will not be affected by this project.

Upstream from the project area is the Randall Davey Audubon Center. The Center encompasses 135 acres that were originally part of the Talaya Hill Grant given in 1731 to Manuel Trujillo. The Randall Davey House, which is listed in National, State and City of Santa Fe Registers of Historic Places, was originally built as a sawmill, and provided lumber for the building of Fort Marcy. Artist Randall Davey lived and painted in the house from 1920–1964 (Audubon New Mexico 2008). The house is now maintained as a museum.

Consistent with the Department of Defense's American Indian and Alaska Native Policy, signed by Secretary of Defense William S. Cohen on October 28, 1998, and based on the State of New Mexico Indian Affairs Department's 2008 Native American Consultations List, American Indian tribes that have indicated they have concerns in Santa Fe are being contacted regarding the proposed project, including the Comanche Nation of Oklahoma, the Hopi Tribal Council, the Jicarilla Apache Nation, the Kiowa Tribe of Oklahoma, the Navajo Nation, Ohkay Owingeh, the Pueblo de Cochiti, the Pueblo of Isleta, the Pueblo of Nambe, the Pueblo of Pojoaque, the Pueblo of San Ildefonso, the Pueblo of Santa Clara, and the Pueblo of Santo Domingo.

On May 28, 2008 a Corps archaeologist conducted an intensive pedestrian survey of the project area. The area was highly disturbed during construction of the original water plant facilities, including cutting and filling to level the steep canyon hill slope. No historic properties or artifacts were discovered during survey. The Corps is preparing a negative survey report.

Based on the above information, the Corps is of the opinion that no historic properties will be affected by this undertaking. The Corps will request the State Historic Preservation Officer's concurrence in our finding.

Should previously-undiscovered artifacts or features be unearthed during construction, work would be stopped in the immediate vicinity of the find, a determination of significance made, and further consultation conducted with the New Mexico State Historic Preservation Officer and with American Indian Tribes that may have concerns in the project area.

### 3.4 Land Use and Socioeconomic Considerations

The City of Santa Fe is located in Santa Fe County, New Mexico. The total population of Santa Fe in 2006 was estimated to be 73,199 (U.S. Census Bureau, 2008). The total population of Santa Fe County in 2006 was estimated to be 142,955 (U.S. Census Bureau, 2008). Within the City of Santa Fe, the ethnic background is: White, 75.0%; Black or African American, 0.4%; American Indian and Alaska Native, 2.5%; Asian, 1.9%; Native Hawaiian and other Pacific Islander, 0.3 and some other race, 16.9%. The percentage of Hispanic or Latino (of any race) is 44.5% (U.S. Census Bureau, 2008). The per capita money income in the City of Santa Fe is \$30,776 (U.S. Census Bureau, 2008). The unemployment rate for the City of Santa Fe in 2006 was estimated to be 3.4% (U.S. Census Bureau, 2008). The top industries within the city include the following: educational services, health care, social assistance, arts, entertainment, professional, scientific, management and waste management services.

The proposed project would take place entirely within the existing fenced area where the WTP is located. The WTP is a critical component to the water system and supplies approximately 40% of demand (5,040 ac-ft/yr) for the City of Santa Fe and Santa Fe County. Adjacent property includes residential homes and open land. The proposed project would not affect land use or socioeconomic resources in the project area. There would be no effect to land use or socioeconomic considerations from the no-action alternative.

### 3.5 Human Health and Safety

Due to its age, the 35-year old WTP is in need of modifications to its unit processes to maintain effective treatment capabilities. The proposed improvements and modifications would also enable the WTP to meet the goals of the Safe Drinking Water Act amendments. Currently there is no redundancy in the residuals process and could easily lead to a complete shutdown of the facility and create the inability to provide peak flow conditions to city and county customers. Human health and safety would be beneficially affected due to the proposed project. The no-action alternative would have a detrimental effect to human health.

### 3.6 Environmental Justice

Executive Order 12898 (Federal Actions to Address Environmental Justice in Minority Low-Income Populations; February 11, 1994) was designed to focus the attention of federal agencies on the human health and environmental conditions of minority and low-income communities. It requires federal agencies to adopt strategies to address environmental justice concerns within the context of agency operations and proposed actions. In an accompanying memorandum, President Clinton emphasized that existing laws, such as NEPA, should provide an opportunity for federal agencies to assess the environmental hazards and socioeconomic impacts associated with any given agency action upon minority and low-income communities. In April of 1995, the EPA released a guidance document entitled Environmental Justice Strategy: Executive Order 12898. In short, this document defines the approaches by which the EPA will ensure that disproportionately high environmental and/or socioeconomic effects on minority and low-income communities are identified and addressed. Further, it establishes agency wide goals for all Native Americans with regard to Environmental Justice issues and concerns.

The City of Santa Fe Wastewater Treatment Plant Upgrade Project would be conducted under Section 595 of the Water Resources Development Act of 1999 (Public Law 106-53; 33 U.S.C. 2201 *et seq.*) as amended. This program is largely intended to provide needed assistance (technical, financial, etc.) to communities in which water resources are degrading and in need of improvement. No adverse impacts on minority and low-income populations are expected. Under the definition of Executive Order 12898, there would be no adverse environmental justice impacts under the proposed action and the no-action alternative.

### 3.7 Cumulative Impacts

NEPA defines cumulative effects as "...the impact on the environment which results from the incremental impact of the action when added to other, past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions."

The proposed project is located within a disturbed, fenced lot where an existing WTP is located. Since the construction work primarily involves the installation of new equipment, most environmental impacts associated with the proposed project would have occurred from previous development activities. These impacts have stabilized and have been considered the baseline against which impacts of the proposed project have been compared. Installation of the new equipment would occur on already disturbed ground. This would not significantly impact the current conditions of the local environment. For these reasons, the proposed project when combined with past, present, or future activities within the City of Santa Fe would not significantly add to or raise local cumulative environmental impacts to a level of significance.

Another proposed Corps' project, Acequia del Llano, is located just upstream of the existing WTP, between the Randall Davey Audubon center and Nichols Dam. This area is closed to the public as is the upper Santa Fe River watershed. The land along the road and river in the project area and up to McClure dam is owned by the City of Santa Fe but surrounded by Forest Service land. Project components include the following:

- Installing approximately 1,920 linear feet of six inch diameter, 80 PSI PVC irrigation pipe along and below the existing earthen ditch.
- Construction of a reinforced concrete outlet structure with a drainage gate.

The objectives of the acequia rehabilitation project are to improve water delivery efficiency by limiting seepage and evaporative loss and to reduce maintenance required to clean sediment from the ditch. Only short-term, minor adverse impacts to noise and traffic are expected to occur. No long-term, adverse impacts are expected to occur as a result of this project. The Acequia del Llano project is scheduled for November 2008 with a duration of about six weeks.

#### 4.0 CONCLUSIONS AND SUMMARY

The proposed action evaluated in this Draft EA addresses the method and potential effects for upgrading the existing WTP. The no-action alternative potential effects are also evaluated.

Due to the previously disturbed and well-developed region of the project area, impacts to the environment would be non-significant and short-term. The proposed water treatment plant upgrades would benefit approximately 60,000 residents of the City of Santa Fe and Santa Fe County. The proposed project would not result in any moderate or significant, short-term, long-term, or cumulative adverse effects. Therefore, construction of the proposed project would not significantly affect the quality of the human environment and is recommended for implementation.

#### 5.0 PREPARATION, CONSULTATION AND COORDINATION

##### 5.1 Preparation

This Draft EA was prepared for the City of Santa Fe by the U.S. Army Corps of Engineers, Albuquerque District (USACE). Personnel primarily responsible for preparation include:

Danielle A. Galloway	Biologist, USACE, Albuquerque District
Lance A. Lundquist	Archeologist, USACE, Albuquerque District
Michael P. Martinez	Project Manager, USACE, Albuquerque District

##### 5.2 Quality Control

This Draft EA has been reviewed for quality control purposes. Personnel who reviewed this PDEA include:

Ondrea C. Hummel	Senior Biologist, USACE, Albuquerque District
Greg D. Everhart	Senior Archaeologist, USACE, Albuquerque District
Julie Alcon	Supervisory Ecologist, Albuquerque District

### 5.3 General Consultation and Coordination

Agencies and entities contacted formally or informally in preparation of this Draft EA include:

Mr. Wally Murphy  
US Fish and Wildlife Service  
New Mexico Ecological Services Field Office

Mr. Robert Sivinski  
NM Forestry and Resources Conservation Division  
Energy, Minerals, and Natural Resources Department

Mr. Matt Wunder  
NM Department of Game and Fish  
Conservations and Services Division

Mr. Ed Kelley  
Water and Waste Management Division  
NM Environmental Department

Mr. Brian Snyder  
Water Division Engineer Supervisor  
City of Santa Fe

### 5.4 Distribution List for Draft EA

Mr. Wally Murphy  
Field Supervisor  
U.S. Fish and Wildlife Service

Mr. Rob Lawrence  
USEPA, Region 6  
Office of Planning and Coordination (6EN-XP)

Mr. Steve Hansen  
Deputy Area Manager  
Bureau of Reclamation

Mr. Robert Sivinski  
New Mexico State Forestry Division  
Energy, Minerals, and Natural Resources Department

Mr. Matt Wunder  
New Mexico Department of Game and Fish  
Conservation Services Division

Mr. Ed Kelley, Director  
Water and Waste Management Division  
New Mexico Environmental Department

Mr. John R. D'Antonio, Jr.  
State Engineer  
New Mexico State Engineer

Mr. Etevan Lopez  
New Mexico Interstate Stream Commission

Mr. Galen M. Buller  
City Manager, Santa Fe

Mr. Brian Snyder  
Water Division Engineer Supervisor  
City of Santa Fe

Mr. Robert P. Romero  
Director of Public Works  
City of Santa Fe

Mrs. Mary Adams  
Santa Fe Public Library

Tribes (various)

Adjacent Property Owners (notified by Neighborhood Associate Website)

## 6.0 REFERENCES

Brown, David E.

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**Appendix A**  
**Cultural Resources Consultation Letter**



DEPARTMENT OF THE ARMY  
ALBUQUERQUE DISTRICT, CORPS OF ENGINEERS  
4101 JEFFERSON PLAZA NE  
ALBUQUERQUE NM 87109-3435

October 31, 2008

Planning, Project and Program Management Division  
Planning Branch  
Environmental Resources Section

Ms. Katherine Slick  
State Historic Preservation Officer  
Historic Preservation Division  
Bataan Memorial Building  
407 Galisteo Street, Suite 236  
Santa Fe, New Mexico 87501

Dear Ms. Slick:

Pursuant to 36 CFR Part 800, the U.S. Army Corps of Engineers (Corps), Albuquerque District, is seeking your concurrence in our determination of "no historic properties affected" for a proposed water system improvement project for the City of Santa Fe, Santa Fe County, New Mexico. A negative survey report is enclosed for your review.

The Corps, in cooperation with and at the request of the City of Santa Fe, New Mexico, is planning a project to install new equipment at the existing wastewater treatment plant (WWTP) to improve the residuals processing, handling and disposal. Two prior phases have been completed at the WWTP without Corps involvement, which included filter rehabilitations and clarifier modifications. This project would be Phase III of the WWTP improvements. The construction work would be conducted under Section 595 of the Water Resources Development Act of 1996 (Public Law 99-662; 33 U.S.C. 2201 et. seq), as amended. The Act authorizes the Corps to provide assistance for design and construction for water-related environmental infrastructure and resource protection and development projects in central New Mexico. The City of Santa Fe is the local sponsor.

The proposed installation of new equipment, including two 65-foot diameter gravity thickeners, one additional 80,000 gallon EQ tank for spent filter backwash water, a EQ mix/recycle pumping station, a spent filter backwash treatment using plate settlers, and a residual processing building with batch tanks and centrifuges, is required in recognition of upcoming regulations related to the handling, processing and disposal of

WWTP residuals. The proposed project is located on the Santa Fe, New Mexico USGS 7.5' Quadrangle Map (35105-f8), at the City's WWTP located on the eastern edge of Santa Fe, up Canyon Road, south of the Santa Fe River, and just downstream from the Randall Davey Audubon Center (see Attachment 1, Figure 1).

Pursuant to 36 CFR 800.2, consulting parties in the Section 106 process identified for the Undertaking include the Corps and your office. The Corps contacted the City of Santa Fe to determine if the project was under the jurisdiction of the Santa Fe Historic Districts and Archaeological Districts ordinances. Ms. Marissa Barrett of the City of Santa Fe Historic Preservation department indicated that the project is outside City's preservation ordinance, but requested a copy of the final report for their records.

Consistent with the Department of Defense's American Indian and Alaska Native Policy, signed by Secretary of Defense William S. Cohen on October 28, 1998, and based on the State of New Mexico Indian Affairs Department's 2008 Native American Consultations List, comments and concerns from American Indian Tribes that have indicated they have an interest in Santa Fe County have been and will continue to be considered regarding the proposed project. To date, the Corps is unaware of and has not received any indication of tribal concerns that would impact this project. The Corps has no knowledge of any Traditional Cultural Properties (TCPs) within the project area.

Pursuant to 36 CFR 800.4, the Area of Potential Effects (APE) for the Undertaking is considered to be the construction footprint for the new WWTP, totaling 7.29 acres. The City owns a 9.72-acre parcel, but the undisturbed forested 2.43 acres to the south will not be impacted by this project. Work would be conducted within current city property. Staging and access will use (without modification) existing city facilities and roads. The project is located on a canyon hill slope; to construct a flat surface for the original 35-year-old WWTP, approximately 20 feet of material was removed from the slope on the south side and relocated on the north side, resulting in a project area that is relatively flat but 100 percent disturbed.

Pursuant to 36 CFR 800.4(b), A Corps' archaeologist conducted an intensive pedestrian survey of the proposed WWTP APE on May 28, 2008. Enclosed for your review is the negative survey report titled "A 9.7-acre Cultural Resources Inventory for the Santa Fe Canyon Road Waste Water Treatment Plant, Santa Fe County, New Mexico," prepared by Lance Lundquist (Report No.

COE-2008-012, NMCRIS No. 111981). No historic properties or isolated occurrences were identified during survey. The Acequia del Llano is located on the southern portion of the City's property, but is located 20 feet above the WWTP outside the APE and will not be affected by this project and is not reported herein.

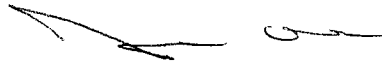
Based on an ARMS map search, the western portion of the project area is considered to contain two properties listed on the State Register; Spanish Log Cabin (SR 256) and the Santa Fe Waterworks Reservoir (SR 577) (see Attachment 1, Figure 2). Upon further research, and based on the results of survey, it is clear that neither registered property is located within the APE of the WWTP. The Waterworks Reservoir--drained since 1994--is drawn as a rectangle, providing an inclusive but inaccurate portrayal of the actual reservoir footprint (Attachment 1, Figure 1 provides a more accurate view of the property as the pool of water to the northwest of the project area). The Spanish Log Cabin was not relocated at or near the property. The current building that is located in the general vicinity of the cabin is modern, built within the last 10 years, and the WWTP site manager does not recall the presence or location of a historic cabin at the WWTP. The WWTP dates to about the time the Spanish Log Cabin was listed on the State Register (July 5, 1972); perhaps the cabin was removed at that time. Alternatively, the cabin may have been misplotted, or located on the other side of the tall WWTP property fence (although there is not obvious visual evidence), which was not surveyed because it is not located on City property and will not be affected by this undertaking. Please provide this information to the ARMS staff so they can revise their maps, or let us know if we need to provide them with this updated information.

Pursuant to 36 CFR 800.4(d) and as documented in the enclosed negative survey report, the Corps is of the opinion that there would be no historic properties affected by this project or on the historic and cultural resources of the region.

Pursuant to 36 CFR 800.13, should previously unknown artifacts or cultural resource manifestations be encountered during construction, work would cease in the immediate vicinity of the resource. A determination of significance would be made, and further consultation would be conducted with your office and with American Indian Tribes that have cultural concerns in the area.

If you have questions or require additional information regarding the City of Santa Fe Wastewater Treatment Plant, please contact Mr. Lance Lundquist, archaeologist at (505) 342-3671 or me at (505) 342-3281. You may also provide comments to the above address.

Sincerely,



Julie Alcon  
Chief, Environmental Resources  
Section

I CONCUR

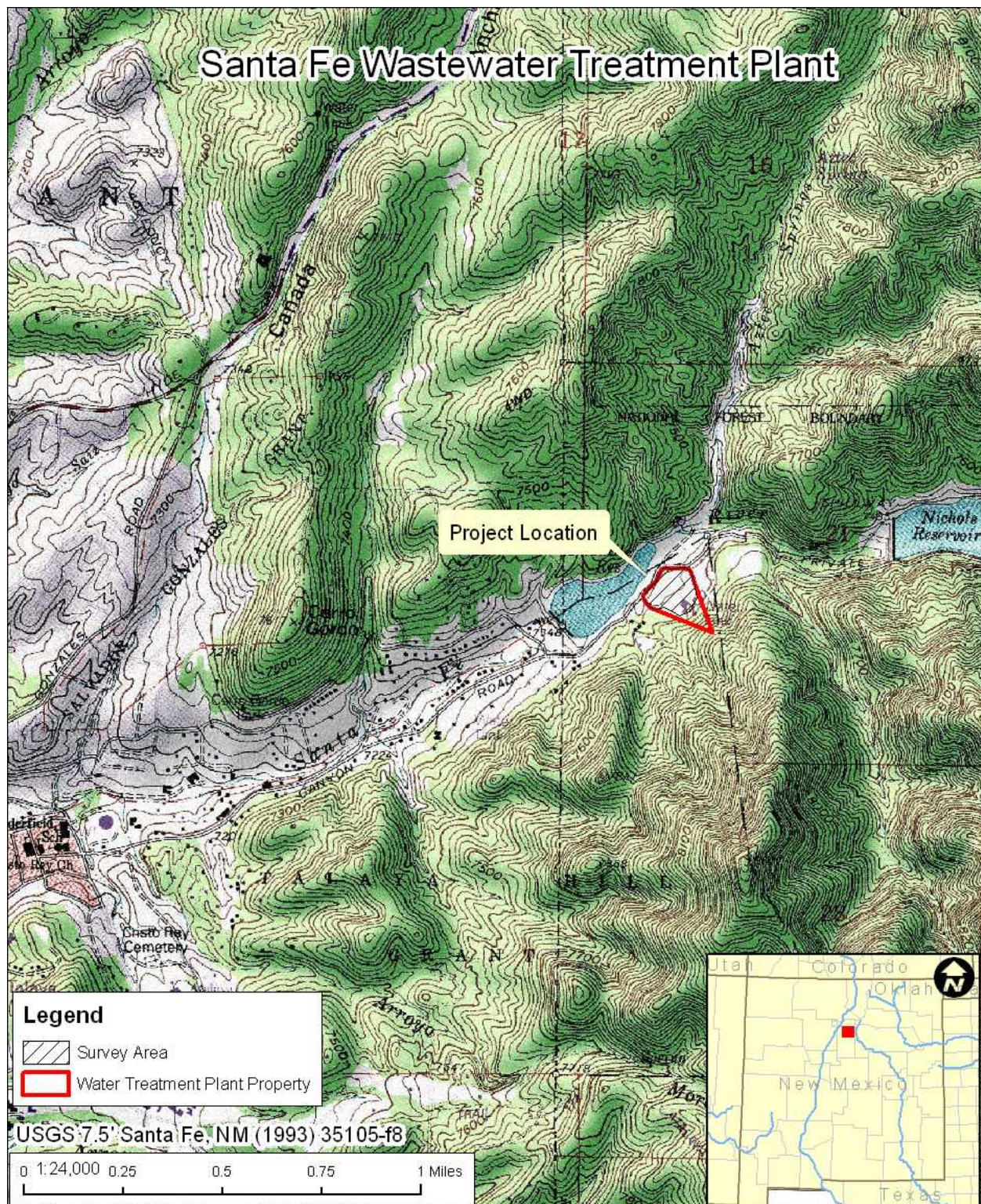
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KATHERINE SLICK  
NEW MEXICO STATE HISTORIC  
PRESERVATION OFFICER

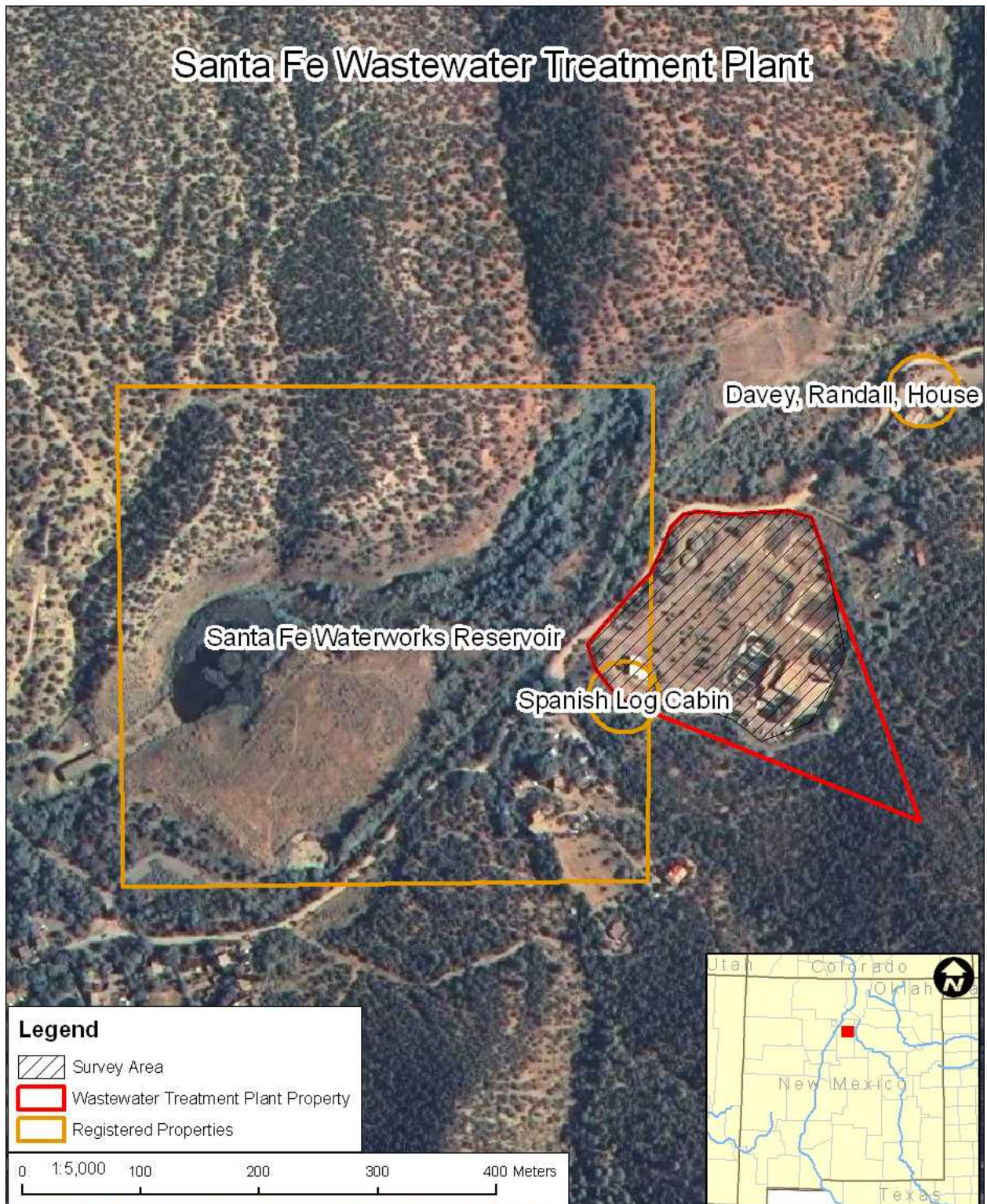
Enclosures

Copy Furnished w/ enclosure:

Marissa Barrett  
Historic Preservation  
200 Lincoln Ave  
Santa Fe, NM 87504



Attachment 1, Figure 1: Project location map. USGS 7.5' Santa Fe, New Mexico (1993) USGS 35108-f8.



Attachment 1, Figure 2: Registered properties in the vicinity of the project area.

# **NMCRIS INVESTIGATION ABSTRACT FORM (NIAF)**

<b>1. NMCRIS Activity No.:</b> 111981	<b>2a. Lead (Sponsoring) Agency:</b> USACE, Albuquerque District	<b>2b. Other Permitting Agency(ies):</b>	<b>3. Lead Agency Report No.:</b> COE-2008-012												
<b>4. Title of Report:</b> A 7.29-ACRE CULTURAL RESOURCES INVENTORY FOR THE SANTA FE CANYON ROAD WASTEWATER TREATMENT PLANT, SANTA FE COUNTY, NEW MEXICO.  <b>Author(s)</b> Lance Lundquist			<b>5. Type of Report</b> <input checked="" type="checkbox"/> Negative <input type="checkbox"/> Positive												
<b>6. Investigation Type</b> <input type="checkbox"/> Research Design <input checked="" type="checkbox"/> Survey/Inventory <input type="checkbox"/> Test Excavation <input type="checkbox"/> Excavation <input type="checkbox"/> Collections/Non-Field Study <input type="checkbox"/> Overview/Lit Review <input type="checkbox"/> Monitoring <input type="checkbox"/> Ethnographic study <input type="checkbox"/> Site specific visit <input type="checkbox"/> Other															
<b>7. Description of Undertaking (what does the project entail?):</b> The Corps is assisting the City of Santa Fe in making upgrades to their existing wastewater treatment plant. Work will be conducted on City property in 100 percent disturbed areas.		<b>8. Dates of Investigation: (from: 5/28/2008 to: 5/28/2008)</b>  <b>9. Report Date:</b> October 31, 2008													
<b>10. Performing Agency/Consultant:</b> USACE, Albuquerque District <b>Principal Investigator:</b> Lance Lundquist <b>Field Supervisor:</b> Lance Lundquist <b>Field Personnel Names:</b> Lance Lundquist		<b>11. Performing Agency/Consultant Report No.:</b> COE-2008-012  <b>12. Applicable Cultural Resource Permit No(s):</b> NM-08-193													
<b>13. Client/Customer (project proponent):</b> USACE <b>Contact:</b> Lance Lundquist <b>Address:</b> U.S. Army Corps of Engineers, Albuquerque District 4101 Jefferson Plaza, NE Albuquerque, NM 87109 Phone: (505) 342-3671		<b>14. Client/Customer Project No.:</b> N/A													
<b>15. Land Ownership Status (<u>Must</u> be indicated on project map):</b> <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Land Owner</th> <th style="text-align: center;">Acres Surveyed</th> <th style="text-align: center;">Acres in APE</th> </tr> </thead> <tbody> <tr> <td>City of Santa Fe</td> <td style="text-align: center;">7.29</td> <td style="text-align: center;">7.29</td> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> <tr> <td style="text-align: right;"><b>TOTALS</b></td> <td style="text-align: center;"><b>7.29</b></td> <td style="text-align: center;"><b>7.29</b></td> </tr> </tbody> </table>				Land Owner	Acres Surveyed	Acres in APE	City of Santa Fe	7.29	7.29				<b>TOTALS</b>	<b>7.29</b>	<b>7.29</b>
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City of Santa Fe	7.29	7.29													
<b>TOTALS</b>	<b>7.29</b>	<b>7.29</b>													
<b>16. Records Search(es):</b> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:45%;">Date(s) of ARMS File Review 5/5/2008</td> <td style="width:35%;">Name of Reviewer(s) Lance Lundquist</td> <td style="width:20%;"></td> </tr> <tr> <td>Date(s) of NR/SR File Review 5/5/2008</td> <td>Name of Reviewer(s) Lance Lundquist</td> <td></td> </tr> <tr> <td>Date(s) of Other Agency File Review</td> <td>Name of Reviewer(s)</td> <td>Agency</td> </tr> </table>				Date(s) of ARMS File Review 5/5/2008	Name of Reviewer(s) Lance Lundquist		Date(s) of NR/SR File Review 5/5/2008	Name of Reviewer(s) Lance Lundquist		Date(s) of Other Agency File Review	Name of Reviewer(s)	Agency			
Date(s) of ARMS File Review 5/5/2008	Name of Reviewer(s) Lance Lundquist														
Date(s) of NR/SR File Review 5/5/2008	Name of Reviewer(s) Lance Lundquist														
Date(s) of Other Agency File Review	Name of Reviewer(s)	Agency													
<b>17. Survey Data:</b> <b>a. Source Graphics</b> <input checked="" type="checkbox"/> NAD 27 <input type="checkbox"/> NAD 83 <input type="checkbox"/> USGS 7.5' (1:24,000) topo map <input type="checkbox"/> Other topo map, Scale: <input checked="" type="checkbox"/> GPS Unit    Accuracy <input type="checkbox"/> <1.0m <input checked="" type="checkbox"/> 1-10m <input type="checkbox"/> 10-100m <input type="checkbox"/> >100m  <b>b. USGS 7.5' Topographic Map Name</b> <b>USGS Quad Code</b> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:40%;">Santa Fe, NM (1993)</td> <td>35105-F8</td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> </table> <b>c. County(ies):</b> Santa Fe				Santa Fe, NM (1993)	35105-F8										
Santa Fe, NM (1993)	35105-F8														

17. Survey Data (continued):

d. Nearest City or Town: Santa Fe, New Mexico

e. Legal Description:

Township (N/S)	Range (E/W)	Section	1/4	1/4	1/4
17N	10E	21	NE, NW, SW.		
17N	10E	21	SW, NW, SW.		

Projected legal description? Yes [ ] , No [x] Unplatted [ ]

f. Other Description (e.g. well pad footages, mile markers, plats, land grant name, etc.): The project is located at the City's wastewater treatment plant located on the eastern edge of Santa Fe, up Canyon Road, south of the Santa Fe River, and just downstream from the Randall Davey Audubon Center.

18. Survey Field Methods:

Intensity: ☒ 100% coverage ☐ <100% coverage

Configuration: ☒ block survey units ☐ linear survey units (l x w): ☐ other survey units (specify):

Scope: ☒ non-selective (all sites recorded) ☐ selective/thematic (selected sites recorded)

Coverage Method: ☒ systematic pedestrian coverage ☐ other method (describe)

Survey Interval (m): 15 Crew Size: 1 Fieldwork Dates: 5/28/2008

Survey Person Hours: 4 Recording Person Hours: 1 Total Hours: 5

Additional Narrative: The entire project area has been previously disturbed by construction.

19. Environmental Setting (NRCS soil designation; vegetative community; elevation; etc.): NRCS soil designation is 300 Arnor gravelly sandy loam, 2 to 8 percent slopes and 301 Enmedio-Atalaya-Rock outcrop complex, 5 to 60 percent slopes 14 inches precipitation average, 130-150 frost-free days. Vegetation is Great Basin Conifer Woodland. Elevation is 7,400 with steep (40+ degree) slopes.

20. a. Percent Ground Visibility: 90 b. Condition of Survey Area (grazed, bladed, undisturbed, etc.): Visibility overall good

21. CULTURAL RESOURCE FINDINGS ☐ Yes, See Page 3 ☒ No, Discuss Why: Area disturbed by initial wastewater treatment plant construction 35 years ago.

22. Required Attachments (check all appropriate boxes):

- ☒ USGS 7.5 Topographic Map with sites, isolates, and survey area clearly drawn
- ☒ Copy of NMCRIS Mapserver Map Check
- ☐ LA Site Forms - new sites (*with sketch map & topographic map*)
- ☐ LA Site Forms (update) - previously recorded & un-relocated sites (*first 2 pages minimum*)
- ☐ Historic Cultural Property Inventory Forms
- ☐ List and Description of isolates, if applicable
- ☐ List and Description of Collections, if applicable

23. Other Attachments:  
☐ Photographs and Log  
☐ Other Attachments  
 (Describe):

24. I certify the information provided above is correct and accurate and meets all applicable agency standards.

Principal Investigator/Responsible Archaeologist: Lance Lundquist

Signature Lance Lundquist Date 10/31/08 Title (if not PI):

25. Reviewing Agency: USACE, Albuquerque

Reviewer's Name/Date John D. Schellberg  
31 October 2008

Accepted (☒) Rejected ( ☐ )

Tribal Consultation (if applicable): ☒ Yes ☐ No

26. SHPO

Reviewer's Name/Date:

HPD Log #:

SHPO File Location:

Date sent to ARMS:

CULTURAL RESOURCE FINDINGS

1. NMCRIS Activity No.: <b>111981</b>	2. Lead (Sponsoring) Agency: <b>USACE, Albuquerque District</b>	3. Lead Agency Report No.: <b>COE-2008-012</b>
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## **SURVEY RESULTS:**

**Sites discovered and registered: 0**

**Sites discovered and NOT registered: 0**

**Previously recorded sites revisited** (site update form required): **0**

**Previously recorded sites not relocated** (site update form required): **0**

**TOTAL SITES VISITED: 0**

**Total isolates recorded: 0**      **Non-selective isolate recording?** ☐

**Total structures recorded** (new and previously recorded, including acequias): **0**

## **MANAGEMENT SUMMARY:**

The Corps, in cooperation with and at the request of the City of Santa Fe, New Mexico, is planning a project to install new equipment at the existing wastewater treatment plant (WWTP) to improve the residuals processing, handling and disposal. Two prior phases have been completed at the WWTP without Corps involvement, which included filter rehabilitations and clarifier modifications. This project would be Phase III of the WWTP improvements. The construction work would be conducted under Section 595 of the Water Resources Development Act of 1996 (Public Law 99-662; 33 U.S.C. 2201 et. seq), as amended. The Act authorizes the Corps to provide assistance for design and construction for water-related environmental infrastructure and resource protection and development projects in central New Mexico. The City of Santa Fe is the local sponsor.

The proposed installation of new equipment, including two 65-foot diameter gravity thickeners, one additional 80,000 gallon EQ tank for spent filter backwash water, a EQ mix/recycle pumping station, a spent filter backwash treatment using plate settlers, and a residual processing building with batch tanks and centrifuges, is required in recognition of upcoming regulations related to the handling, processing and disposal of WWTP residuals. The proposed project is located on the Santa Fe, New Mexico USGS 7.5' Quadrangle Map (35105-f8), at the City's WWTP located on the eastern edge of Santa Fe, up Canyon Road, south of the Santa Fe River, and just downstream from the Randall Davey Audubon Center.

The Corps is unaware of and has not received any indication of tribal concerns that would impact this project. The Corps has no knowledge of any Traditional Cultural Properties (TCPs) within the project area.

The Area of Potential Effects (APE) for the Undertaking is considered to be the construction footprint for the new WWTP, totaling 7.29 acres. Work would be conducted within current city property. Staging and access will use (without modification) existing city facilities and roads. The project is located on a canyon hill slope; to construct a flat surface for the original 35-year-old WWTP, approximately 20 feet of material was removed from the slope on the south side and relocated on the north side, resulting in a project area that is relatively flat but 100 percent disturbed.

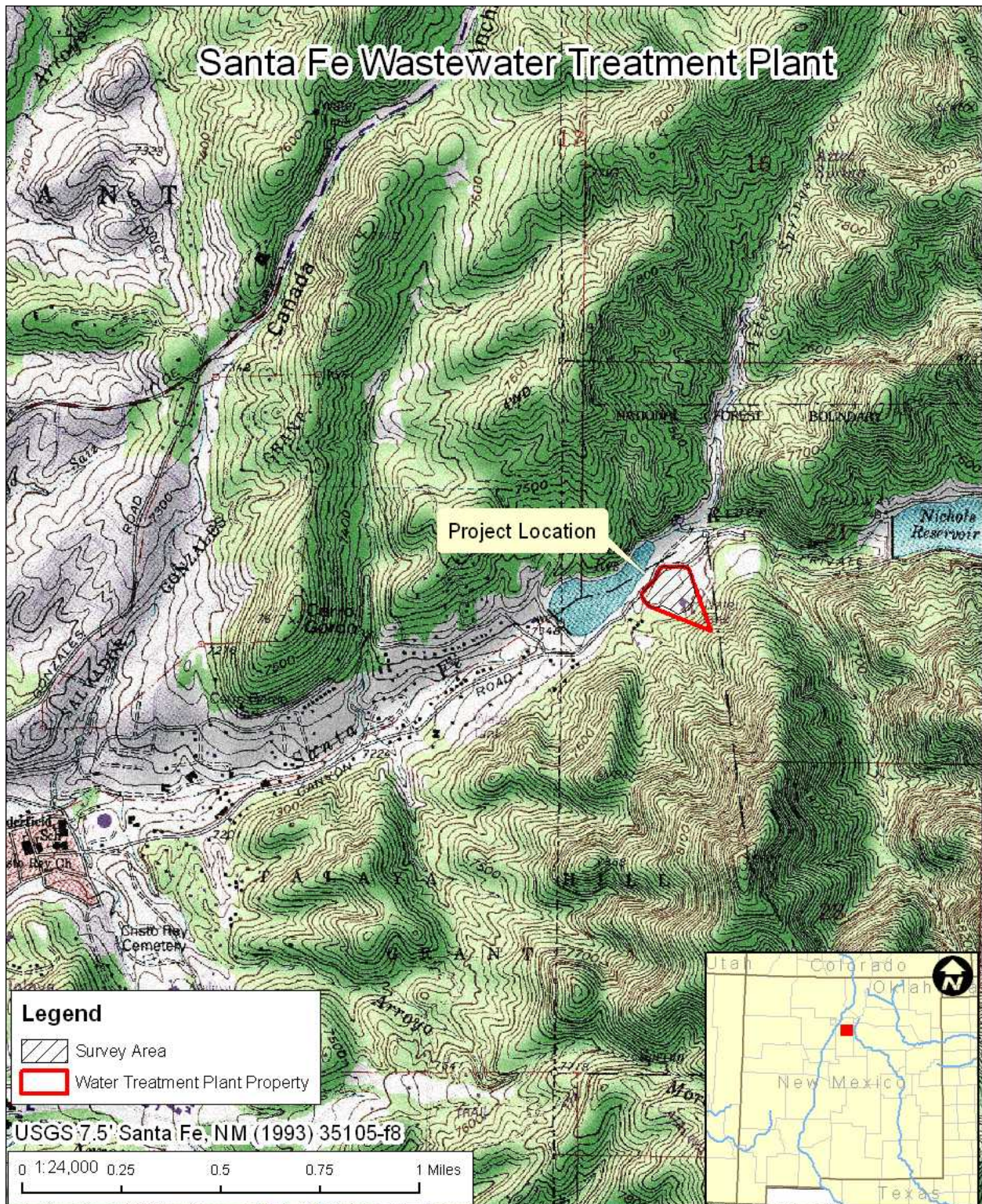
A Corps' archaeologist conducted an intensive pedestrian survey of the proposed WWTP APE on May 28, 2008. No historic properties or isolated occurrences were identified during survey.

Based on an ARMS map search, the western portion of the project area is considered to contain two properties listed on the State Register; Spanish Log Cabin (SR 256) and the Santa Fe Waterworks Reservoir (SR 577). Upon further research, and based on the results of survey, it is clear that neither registered property is located within the APE of the WWTP. The Waterworks Reservoir—drained since 1994—is drawn as a rectangle, providing an inclusive but inaccurate portrayal of the actual reservoir footprint. The Spanish Log Cabin was not relocated at or near the property. The current building that is located in the general vicinity of the cabin is modern, built within the last 10 years, and the WWTP site manager does not

recall the presence or location of a historic cabin at the WWTP. The WWTP dates to about the time the Spanish Log Cabin was listed on the State Register (July 5, 1972); perhaps the cabin was removed at that time. Alternatively, the cabin may have been misplotted, or located on the other side of the tall WWTP property fence (although there is not obvious visual evidence), which was not surveyed because it is not located on City property and will not be affected by this undertaking.

Pursuant to 36 CFR 800.4(d), the Corps is of the opinion that there would be no historic properties affected by this project or on the historic and cultural resources of the region.

**IF REPORT IS NEGATIVE YOU ARE DONE AT THIS POINT.**



Project Location Map. USGS 7.5' Santa Fe, New Mexico (1993, 35105-f8).

# APPENDIX A

## CONFIDENTIAL SITE LOCATION DATA

**— FOR OFFICIAL USE ONLY —**

The public disclosure of the location of archaeological sites on state and private lands is prohibited by Section 18-6-11.1 NMSA 1978. Public disclosure of archaeological site locations is federally prohibited by 16 USC 470hh (36 CFR 296.18).

If the pages in this appendix are missing, then this copy was intended for public distribution.

**— REMOVE APPENDIX PRIOR TO PUBLIC DISTRIBUTION —**

Public version – confidential site information has been removed.